

What is claimed is:

1. A linear motion guide unit; comprising a pair of guideway members lying movable relatively to one another and having confronting raceway grooves on their sides extending in lengthwise direction, a cage retaining more than one rolling element in a raceway defined between the raceway grooves on the guideway members, the cage being made in a form of sheet extending the lengthwise direction, and means for keeping the cage against wobbling;

wherein the means for keeping the cage against wobbling is comprised of a pinion holder fit in a hook hole in the cage after once having been made deformed, racks lying on the guideway members, and a pinion provided with teeth mating with the racks and installed in the cage for rotation.

2. A linear motion guide unit constructed as defined in claim 1, wherein the pinion holder is made therein with an aperture where a disc with teeth around there of the pinion is accommodated for rotation, and bearing recesses to carry loosely therein pinion shafts of the pinion for rotation.

3. A linear motion guide unit constructed as defined in claim 1, wherein the pinion holder has a flange extending out of a periphery of pinion holder to

come into abutment against any one surface of an edge around the hook hole cut in the cage, and an snap hook extending from the periphery of the pinion holder to make engagement with another surface of the edge around the hook hole cut in the cage after deformation of the pinion holder.

4. A linear motion guide unit constructed as defined in claim 3, wherein the pinion holder is made in a substantially rectangular configuration, which is defined by the periphery of a pair of lengthwise longer sides and a pair of shorter ends normal to the longer sides, and the flange extends from any one of the longer side and shorter end at a level coming into abutment against the one surface of the edge around the hook hole while the snap hook is out of the other at another level coming into engagement with the another surface of the edge around the hook hole.

5. A linear motion guide unit constructed as defined in claim 4, wherein the flange extends from the other of the longer side and shorter end at the another level coming into abutment against the another surface of the edge around the hook hole.

6. A linear motion guide unit constructed as defined in claim 3, wherein the pinion holder is made with a working hole used to get the pinion holder

deforming elastically so as to squish the aperture to snap the snap hook into engagement with the another surface of the edge around the hook hole.

7. A linear motion guide unit constructed as defined in claim 3, wherein the pinion holder has a cavity next to the snap hook to make the snap hook ready to experience elastic deformation.

8. A linear motion guide unit constructed as defined in claim 1, wherein the pinion is comprised of the disc which the successive teeth are positioned at a circular regular pitch around the disc to form slots each separating any two adjacent teeth, and the pinion shafts carried for rotation in the pinion holder to provide an axis about which the disc rotates.

9. A linear motion guide unit constructed as defined in claim 1, wherein the racks lie lengthwise in relief valleys cut deep in the raceway grooves in the guideway members.

10. A linear motion guide unit constructed as defined in claim 9, wherein the rack is composed of successive teeth spaced apart from each other at preselected intervals to allow the teeth to mesh with the pinion, and side walls extending in longitudinal direction on sidewise opposite sides of the teeth, one to each side, to connect the successive teeth together

with one another.

11. A linear motion guide unit constructed as defined in claim 1, wherein any one of the guideway members is a track rail while the other is a slider, both the track rail and the slider being made on their confronting surfaces with raceway grooves, which provide a pair of raceways allow the rolling elements running through there, and the cages to retain the rolling elements are placed in the raceways, one to each raceway, and joined together with a connecting web where there is provided the pinion holder for the means to keep the cage against wobbling.

12. A linear motion guide unit constructed as defined in claim 11, wherein both the track rail and the slider are made with lengthwise recesses, which lie midway between the sidewise opposing raceways in opposition to one another to accommodate therein the racks for means to keep the cage against wobbling.

13. A linear motion guide unit constructed as defined in claim 1, wherein the rolling elements are either cylindrical rollers or balls, which are allowed to run through over a pair of rolling-contact surfaces formed in the raceway grooves of the guideway members.

14. A linear motion guide unit constructed as defined in claim 1, wherein the guideway members have

stoppers to keep the cage against falling away from the guideway members.

15. A linear motion guide unit constructed as defined in claim 1, wherein the guideway members have fastening means to mount any moving bodies including tables, mounting parts and so on or any stationary bodies including beds and so on thereon.